



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,160	01/16/2002	Woong K. Yoon	4366-52	1038

7590

11/21/2003

Bradley M. Knepper
SHERIDAN ROSS P.C.
1560 Broadway, Suite 1200
Denver, CO 80202-5141

EXAMINER

OMGBA, ESSAMA

ART UNIT

PAPER NUMBER

3726

DATE MAILED: 11/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/052,160

Applicant(s)

YOON, WOONG K.

Examiner

Essama Omgba

Art Unit

3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-21 is/are allowed.
- 6) ☒ Claim(s) 1-6,9 and 22 is/are rejected.
- 7) ☐ Claim(s) 7,8 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 17-21 are objected to because of the following informalities: in claim 17, line 13, "first" should read --second--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6, 9 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Morris (US Patent 4,012,155).

With regards to claim 1, Morris discloses a universal snap-fit spacer system comprising a fastener member 10 comprising a body portion 28, a resilient portion 20 and a locking assembly 23, wherein the resilient portion biases the locking assembly into a first position, a spacer element 12 comprising an interior bore 42, a plurality of recesses 45, 46 formed in the interior bore, wherein the locking assembly of the fastener member may be received in one of the plurality of recesses to prevent the fastener member from being withdrawn from the spacer element, see column 3, lines 62-68, column 4, lines 1-68, column 5, lines 1-5 and figures 2-4.

For claims 2 and 3, see figure 4.

For claim 4, see figure 3.

For claim 5, see column 4, lines 47-53 and figure 2.

For claim 6, see figures 3 and 4.

For claim 9, see figure 2.

For claim 22, recesses 45 and 45 are axially aligned as can be seen in figure 2.

4. Claims 11, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Yagi et al. (US Patent 4,627,760).

With regards to claims 11 and 13, Yagi et al. discloses a method for interconnecting objects, the method comprising interconnecting a first snap fit fastener member 1 to a first object 21, interconnecting the first snap fit fastener member to a spacer element 23, interconnecting a second snap fit fastener member 1 to a second object 21, interconnecting the second snap fit fastener member to the spacer element wherein the first and second object are fastened to one another, wherein each of the first and second objects are in contact with the spacer element, and wherein the first snap fit member is substantially identical to the second snap fit fastener member, the first and second objects being first and second circuit boards respectively, see column 2, lines 30-53 and column 3, lines 9-47.

For claim 14, Applicant should note that the first circuit board of Yagi et al. is of a first thickness and the second circuit board of Yagi et al. is of a second thickness, the first and second thicknesses being substantially equal.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yagi et al. in view of Coules (US Patent 3,836,703).

Yagi et al. discloses a method of interconnecting circuit boards as shown above except for the first circuit board being of a first thickness and the second circuit board being of a second thickness. However it is known to interconnect circuit boards of different thicknesses as attested by Coules, see figure 4. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made that interconnecting circuit boards of different thicknesses is well within the general knowledge of one of ordinary skill in the art as illustrated by Coules.

Allowable Subject Matter

7. Claims 7, 8, 10, 12, 15 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 17-21 would be allowable if rewritten or amended to overcome the objections set forth in this Office action.

Response to Arguments

9. Applicant's arguments filed on August 22, 2003 have been fully considered but they are not persuasive.

In response to Applicant's argument that there is no disclosure of a spacer element having a plurality of recesses in which a fastener member may be received to prevent the fastener from being withdrawn from the spacer element, the examiner respectfully disagrees. Morris does indeed disclose a spacer element 12 having a plurality of recesses 45, 46 as outlined above in the rejection. Recess 45 prevents fastener member 10 from being withdrawn from the spacer element, therefore the limitation "wherein said locking assembly of said fastener member may be received in at least one of said plurality of recesses to prevent said fastener member from being withdrawn from said spacer element" is met by the Morris reference.

10. Applicant's arguments with respect to claims 11, 13 and 14 have been considered but are moot in view of the new ground(s) of rejection.

In view of the above remarks, the examiner maintains that claims 1-6, 9 and 22 are anticipated by Morris.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Essama Omgba whose telephone number is (703) 305-2915. The examiner can normally be reached on M-F (10-7:30) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (703) 308-1789. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3579.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

eo

November 6, 2003



PETER VO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700